1.   (Currently Amended) A method for transmitting packets over a packet switch network which includes a plurality of multimedia transceivers for sending and receiving multimedia communications, the method comprising the steps of :

providing at least two predefined network states for comparing with a monitored network state, wherein the step of providing includes analyzing said network to identify a delay based upon a media communication, categorizing said network into at least two states upon analyzing said network, said at least two states corresponding to said at least two predefined network states, and packaging at least one media frame according to each of said at least two predefined network states;

monitoring said network state;

selecting one state of the at least two predefined network states in accordance with said monitored network state;

sampling to obtain at least one media sample and placing said media sample into a packet; and

transmitting said packet over said network, wherein the number of media samples in a packet is in accordance with said selected predefined network state.

2.   (Original) The method of claim 1, wherein said at least one media sample includes a plurality of media samples, and said plurality of media samples are arranged in at least one frame within said packet.

3.   (Original) The method of claim 2, wherein said packaging step includes packaging said at least

one media sample in accordance with the media quality of the receiving transceiver.

4.   (Original) The method of claim 3, wherein said packaging step includes packaging said at least

one frame into said packet with a first network protocol parameter.

5.   (Canceled)

6.   (Original) The method of claim 3, wherein said at least one frame includes at least two frames,

said at least two frames including at least one frame and at least one redundant frame and said packaging

step includes packaging said at least two frames into said packet with a second network protocol

parameter.

7.   (Canceled)

8.   (Currently Amended) The method of claim 1, wherein said step of ~~providing two predefined~~

~~network states includes the steps of:~~

~~────~~analyzing includes analyzing said network in accordance with a received audio communication;

~~────categorizing said network into at least two states upon analyzing said network, said at least two~~

~~states corresponding to said at least two predefined network states; and~~

~~packaging at least one media frame according to each of said at least two predefined network~~

~~states.~~

9.   (Original) The method of claim 1, wherein the step of monitoring comprises the steps of:

transmitting a test packet between a first transceiver and a second transceiver; and

measuring at least one network parameter for determining said network state at said first

transceiver.

10.   (Original) The method of claim 9, wherein said at least one network parameter is a period of

time for said test packet to travel from the first transceiver to said second transceiver and back to said

first transceiver.

11.   (Original) The method of claim 9, wherein said at least one network parameter is a count of

packets lost in the transmission from first transceiver to the second transceiver and back to said first

transceiver.

12.   (Currently Amended) An apparatus for transmitting packets over a packet switch network

comprising:

storage means for storing data corresponding to at least two predefined network states for

comparing with a detected network state, said two predefined network states provided by analyzing said

network to identify a delay based upon a media communication and categorizing said network into at

least two states upon analyzing said network, said at least two states corresponding to said at least two

predefined network states;

monitoring means for monitoring and detecting at least one network state;

selecting means for selecting at least one state of the at least two predefined network state with

accordance to said detected network state;

sampling means for providing samples of at least one media type;

packaging means for packaging at least one protocol parameter with said media samples for

providing a packet; and

transmitting means for transmitting said packet in accordance with said detected network state.

13.   (Original) The apparatus of claim 12, wherein the sampling means comprises:

an audio sampling device; and

a video sampling device.

14.   (Original) The apparatus of claim 12, further comprising:

an allocator operably coupled to said monitoring means for receiving said network state; and

at least one media bit rate controller for controlling transmission speed and said network load

in accordance with said detected network state.

15.   (Original) The apparatus of claim 14, wherein said at least one media bit rate controller is an audio bit rate controller.

16.   (Original) The apparatus of claim 15, wherein said at least one media bit rate controller is a video bit rate controller.

17.   (Currently Amended) An apparatus for controlling transmitting of media streams over a packet switch network comprising:

a network monitor for monitoring a network state, by analyzing said network to identify a delay based upon a media communication and categorizing said network into at least two states upon analyzing said network, said at least two states corresponding to said at least two predefined network states;

a selector for selecting at least one state out of at least two predefined network states in accordance with said monitored network state;

sampling means for providing at least one media sample of at least one media type;

compressing means for compressing said at least one media sample into at least one media frame;

packaging means for packaging at least one communication protocol parameter with said at least one media frame for providing a packet; and

means for transmitting said packet which is constructed with accordance with said network state.

18.   (Original) The apparatus of claim 17, wherein said sampling means further comprise:

an audio sampling device; and

a video sampling device.

19.   (Currently Amended) The apparatus of claim 17, wherein said compressing means comprise:

an audio compression for providing audio frames;

and a video <u>compression</u> for providing video frames.

20.   (Currently Amended) A method for transmitting packets over a packet switch network which includes a plurality of multimedia transceivers for sending and receiving multimedia communications, the method comprising the steps of:

providing at least two predefined network quality states<u>, wherein the step of providing network quality states includes analyzing said network to identify a delay based upon a media communication, categorizing said network into at least two states upon analyzing said network, said at least two states corresponding to said at least two predefined network states, and packaging at least one media frame according to each of said at least two predefined network states</u>;

monitoring said network to detect at least one network quality state;

selecting one quality state from the at least two predefined network quality states in accordance with said detected network quality state;

creating at least one packet by placing at least one audio or video sample and at least one

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network protocol parameter into a package in accordance with said selected network quality state; and

transmitting said packet over said network.

21.   (Original) The method of claim 20, wherein said network quality states are selected from the group consisting of:

not sufficient quality;

sufficient quality; and

high quality.

22.   (Currently Amended) A method of claim 21, wherein said not sufficient quality state is a monitored transmission of packets via a first protocol over said network which ~~result a~~ results in packet loss.

23.   (Original) The method of claim 22, wherein said sufficient quality state is a monitored transmission of packet which includes at least two audio frames via a second protocol which includes at least one packet frame having at least one redundant frame over said network.

24.   (Original) The method of claim 23, wherein said sufficient quality state is a monitored transmission of a packet which includes at least two audio frames via the first protocol over said network, which transmission result a packet loss.

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25.   (Original) The method of claim 21, wherein said high quality state is a monitored transmission

of a packet which includes a single audio frame via the second protocol over said network, which

transmission result a packet loss.

26.   (Original) The method of claim 25, wherein said high quality state is a monitored transmission

of a packet which includes a single audio frame, via said first protocol over said network

27.   (Original) The method of claim 21, wherein the step of selecting said quality state further

includes the step of:

        selecting a network quality state in accordance with an available network bandwidth.

28.   (Original) The method of claim 27, wherein the step of selecting comprising:

        selecting the lower quality state from said presently selected quality state if available network

bandwidth is decreased.

29.   (Currently Amended) A method for transmitting at least one packet over a packet IP switch

network comprising the steps of:

        monitoring said network for determining the available bandwidth for transmission over said

network by identifying a delay based upon a multimedia communication sent and received; and

                determining a quality state for transmission, said quality state corresponding to said detected

available bandwidth;

adjusting bit rate for transmission in accordance with said determined quality state; and

transmitting said at least one packet over said network in accordance with the adjusted bit rate.

30.   (Original) The method of claim 29, wherein said step of adjusting bit rate includes the step of:

increasing bit rate for transmission with increased quality upon detection of increased available

bandwidth.

31.   (Currently Amended) An apparatus for transmitting packets over a packet switch network

comprising:

a storage device having means for providing at least two predefined network states for

comprising with a detected network state, said two predefined network states provided by analyzing said

network to identify a delay based upon a media communication and categorizing said network into at

least two states upon analyzing said network, said at least two states corresponding to said at least two

predefined network states;

a monitor for operatively connecting to said network for monitoring said network and detecting

at least one network;

a selector for selecting at least one state of the at least two predefined network states with

accordance said detected network state;

a sampler;

a packager, said packager for creating packets including samples of media from said sampler;

and

a transmitter for transmitting said packets in accordance with the detected network state.

32.   (Original) The apparatus of claim 31, wherein the sampler includes:

an audio sampling device; and

a video sampling device.

33.   (Original) The apparatus of claim 31, further comprising:

an allocator operably coupled to said monitor for receiving signals corresponding to said

detected network state; and

at least one media bit rate controller for controlling transmission speed and said network load

with accordance with said detected network state.

34.   (Original) The apparatus of claim 33, wherein said at least one media bit rate controller is an

audio bit rate controller.

35.   (Original) The apparatus of claim 33, wherein said at least one media bit rate controller is a

video bit rate controller.

36-38. (Canceled)